ISAYEV, S.I.

International atlas of auroras. Geofiz. biul. no.15:95-98 '65. (MIRA 18:11)

L 38191-66 EEC(k)-2/EWP(k)/EWT(l)/EWT(m)/FBD/T/EWP(t)/ETI IJP(c)

ACC NR: AP6023867 SOURCE CODE: UR/0109/66/011/007/1196/1199

WG/JD/JG

AUTHOR: Solov'yev, Ye. G.; Abazadze, Yu. V.; Isayev, S. K.; Stepanova, Ye. G.; Krynetskiy, I. B.

ORG: none

TITLE: Traveling wave maser using chromium-doped rutile and a magnet with superconducting windings

SOURCE: Radiotekhnika i elektronika, v. 11, no. 7, 1966, 1196-1199

TOPIC TAGS: solid state maser, traveling wave amplifier

ABSTRACT: A traveling-wave maser using a rutile crystal doped with Cr^{3+} is described. The maser uses a magnet with superconducting windings and is designed to work at the lower end of the decimeter band at a temperature of 4.2K. The device is placed either in a kryostat or in a helium microcooler. The maser uses a dielectrically loaded delay comb structure (see Fig. 1), and was found to have the following characteristics: tuning range, 100 Mc; amplification, 15 to 20 db; bandwidth (at a 3-db level), 10—12 Mc; pumping power, 100 mw.

UDC: 621.378.5.029.63

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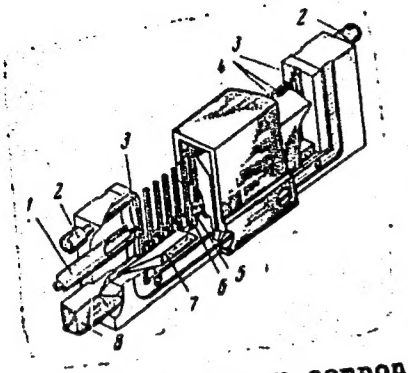

Several ways of increasing the gain of the device are given. Orig. art. has: 4 figures. [NV]

Fig. 1. Basic maser components

1 - Coaxial cable; 2 - teflon screw; 3 - excitation pin; 4 - teflon filling; 5 - ferrite disks; 6 - teflon holder; 7 - active crystal; 8 - pumping waveguide.

SUB CODE: 09/ SUBM DATE: 11May65/ ORIG REF: 003/ OTH REF: 002 ATD PRESS: 5045

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ISAYEV, S.M.

Electric rail-type conveyer with an air lift device. Put'i put. khoz. 5 no.5:13 My '61. (MIRA 14:6)

1. Nachal'nik rel'sosvarochnogo poyezda No.4 (g. Sverdlovsk).
(Railroads--Rails--Welding)
(Conveying machinery)

ISAYEV, S.M.

Train for rail grinding. Put' i put.khoz. 6 no.12:16-17 '62.
(MIRA 16:1)

1. Nachal'nik rel'sosvarochnogo predpriyatiya No.4, Sverdlovsk.
(Railroads--Rails)

ISAYEV, S.M.; SHEVTSOV, G.G.

Long rail lengths on the Ural railroads. Put' i put. khoz. 9 no.1:6 '65 (MIRA 18:2)

1. Nachal'nik rel'sosvarochnogo poyezda No.4, stantsiya Sverdlovsk-Sortirovochnyy, Sverdlovskoy dorogi (for Isayev).
2. Nachal'nik Sverdlovskoy distantsii puti, stantsiya Sverdlovsk-Sortirovochnyy, Sverdlovskoy dorogi (for Shevtsov).

ISAYEV, S.M.

Providing for work safety. Put' i put.khoz. 9 no.4:5 '65.
(MIRA 18:5)

1. Nachal'nik rel'sosvarochnogo poyezda, Sverdlovsk.

ISAYEV, S.N.

Operation of a 2 X 1200 liter shock "shielded" concrete plant. Energ. stroi. no.22:74-75 '61. (MIRA 15:7)

1. Betonnyy zavod Kremenchuggesstroya. (Concrete plants)

ISAYEV, S.S.

Ways of increasing coal output in the Moscow Basin. Mekh.trud. rab.9 no.9:20-21 S'55. (MIRA 8:12)

1. Glavnyy inzhener tresta Krasnoarmeyskugol'.
(Moscow Basin--Coal mining machinery)

KAL'BUS, G.L. [Kal'bus, H.L.], kand.tekhn.nauk; CHUBOV, D.M., inzh.; ISAYEV, S.S. [Isaiev, S.S.], mekhanik

Analyzing the causes of the unsatisfactory performance of the MTZ-5L tractor with the PN-3-35R plow. Mekh. sil'. hosp. 12 no.9:19-21 S '61. (MIRA 14:11)
(Plows)
(Tractors)

KAL'BUS, G. L.[Kal'bus, H.L.], kand.tekhn.nauk; ISAYEV, S.S.[Isiaev, S.S.], tekhnik-mekhanik

Device and method for controlling and regulating hydraulic units. Mekh. sil'. hosp. 12 no.10:9-11 O '61. (MIRA 14:11)
(Agricultural machinery--Hydraulic equipment)

KAL'BUS, G.L. [Kal'bus, H.L.], kand.tekhn.nauk; ISAYEV, S.S. [Isaiev, S.S.], tekhnik-mekhanik

Device and method for controlling and regulating hydraulic units. Mekh. sil'. hosp 12 no.11:10-12 N '61. (MIRA 14:11)
(Agricultural machinery—Hydraulic equipment)

KAL'BUS, G. L., kand. tekhn. nauk; ISAYEV, S. S., tekhnik

Hydraulic mechanism of the mounted system of the MTZ-50PL "Belarus'" tractor. Mashinostroenie no.5:92-95 S-O '62. (MIRA 16:1)

(Tractors—Hydraulic equipment)

KAL'BUS, G.L. [Kal'bus, H.L.], kand.tkehn.nauk; ISAYEV, S.S. [Isaiev, S.S.], tekhnik-mekhanik

Design of hydraulic power steering of the MTZ-50PL tractor and technological care for it. Mekh.sil'.hosp. 13 no.12:20-23 D '62. (MIRA 16:2)

(Tractors—Hydraulic equipment)

ISAYEV, S. S.

Walnuts

Large kernel, thin-skinned walnuts; Sad i og. no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

ISAYEV, S.S.

ISAYEV, S.S. (Kislovodsk).

Valuable variety of walnut. Biul.Glav.bot. sada no.17:113 '54.
(Walnut) (MLRA 8:3)

ISAYEV, S. Zh.

Effect of various methods of supplementary artificial pollination on alfalfa seed yields. Trudy Inst.bot.AN Kazakh SSR 1:177-193 '55. (MLRA 9:11)

(Alfalfa) (Fertilization of plants)

ISAYEV, S.Zh.

Effect of fertilizers on the fruit development and seed yield of alfalfa. Trudy Alma-At.bot.sada 3:105-112 '56. (MLRA 10:3)
(Alma-Ata Province--Alfalfa)
(Fertilizers and manures)

ISAYEV, S.Zh.

Some biological characteristics of alfalfa flowering in the piedmont zone of Alma-Ata Province. Trudy Inst. bot. AN Kazakh. SSR 3:174-192 '56. (MLRA 9:10)

(Alma Ata Province--Alfalfa)

ISAYEV, T.Kh., meditsinskiy brat (Turkmenskaya SSR)

Fariza Pavlovna Kusova. Med. sestra 20 no.4:57 Ap '61.
(MIRA 14:5)

(KUSOVA, FARIZA PAVLOVNA)

ISAYEV,T. Ye.

SATOVSKIY, B.I., inzhener, laureat Stalinskoy premii; VINOKURSKIY, Kh.A., kandidat tekhnicheskikh nauk, laureat Stalinskoy premii; KUBA-CHEK, V.R., inzhener; YASENKEV, D.A., inzhener; ISAYEV, T.Ye., inzhener; YARTSEV, G.M., inzhener; RUDOISKATEL', V.F., inzhener; FAR-NITSKII, A.B., kandidat tekhnicheskikh nauk, redaktor.

[The ESh-14/75 walking excavator] Shagayushchii ekskavator ESh-14/75. Ustroistvo i ekspluatatsiia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi i sudostroitel'noi lit-ry, 1953. 210 p.(MLRA 7:7)

1. Russia (1923- U.S.S.R) Ministerstvo transportnogo i tyazhelo-go mashinostroeniya.
(Excavating machinery)

VINOKURSKIY, Khaim Aronovich; ISAYEV, Timofey Yemel'yanovich; RUDOISKATEL', Vladimir Vasil'yevich; YARTSEV, Grigoriy Matveyevich; YASENEV, Dmitriy Andreyevich; SATOVSKIY, Boris Ivanovich; KUBACHEK, Vladimir Rudol'fovich; SHABASHOV, A.P., kand.tekhn.nauk, red.; DUGINA, N.A., tekhn.red.

[Walking excavators manufactured by the Ural Heavy Machinery Plant] Shagaiushchie ekskavatory Uralmashzavoda. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1958. 329 p. (MIRA 11:12)
(Excavating machinery)

ISAYEV, V.

Universal semiautomatic feeder for poultry. Miss.ind.SSSR 28 no.4:36-37 '57. (MLRA 10:7)

1. Starshiy vetvrach skotobazy Ivanovskogo myasokombinata.
(Poultry houses and equipment)

ISAYEV, V.

Strengthen contractual relations between machine-tractor stations and collective farms. Fin. SSSR 19 no.2:62-64 F '58. (MIRA 11:3)

1.Zamestitel' zaveduyushchego Bryanskim oblfinotdelom.
(Bryansk Province--Collective farms)
(Bryansk Province--Machine--Tractor stations)

ISAYEV, V. and PLAKSON, V.

"The Norms of Scheduled Flights," Moscow, 1949.

ISAYEV, V.

USSR/Electronics - Amplifiers Feb 51

"A Twin-Channel Low-Frequency Amplifier (Central DOSARM Radio Club Laboratory)," V. Isayev

"Radio" No 2, pp 26-29

Describes amplifier for high-quality sound reproduction which was designed by Club Lab and tested by Sound Reproduction Lab, Sci Res Cinephoto Inst. The low-frequency (30-500 cps) and high-frequency (500-15,000 cps) channels are identical in form and each feeds into 3 electrodynamic loud-speakers.

189T38

ISAYEV, V.

188T106

USSR/Electronics - Amplifiers Mar 51

"A Twin-Channel Low-Frequency Amplifier (Laboratory of the Central DOSARM Radio Club)," V. Isayev

"Radio" No 3, pp 25-28

Describes output transformers, loud-speakers, and power supply for twin-channel amplifier. Gives methods for measuring the frequency response and internal noise level of the amplifier. The twin-channel amplifier will emphasize any defects in the equipment from which the signal is taken, and author outlines corrective measures for crystal and magnetic pickups.

188T106

ISAYEV, V.

A training stand for the electrician's workshop. Prof.-tekh. obr. 17 no. 11:22-23 N '60. (MIRA 13:12)

1. Zaveduyushchiy eksperimental'noy masterskoy TSentral'nogo uchebnometodicheskogo kabineta.
(Workshops--Equipment and supplies)

ISAYEV, V.; ANDRIYEVSKAYA, A.

Technical progress guarantees success. Stroitel' no.11:3-4 N '60.
(MIRA 13:11)

1. Nachal'nik Glavleningradstroya (for Isayev). 2. Spetsial'nyy korrespondent zhurnala "Stroitel'" (for Andriyevskaya).
(Leningrad--Construction industry)

ISAYEV, V.

Friends share experience. Mashinostroitel' no.9:16-17 S '61.
(MIRA 14:10)
(Metal-cutting tools)

ISAYEV, V.

Section of white coats. Mashinostroitel' no.6:4 Je '61.
(MIRA 14:6)
(Leningrad--Machinery industry)

ISAYEV, V.; TSEYTLIN, V.

Quality should be perfect. Mashinostroitel' no.10:14-15 O '61.
(MIRA 14:9)
(Leningrad—Machinery industry)

ISAYEV, V., inzh.

Progressive method of operating airplanes with crews working in shifts. Grazhd.av. 12 no.2:25-26 F '55. (MIRA 16:1)
(Aeronautics, Commercial)

BARUTKIN, I.; ISAYEV, V.; PODSHCHEKOLDIN, M.

Checking oil dirtiness during the running-in of engines on stands. Avt.transp. 41 no.2:27-28 F '63. (MIRA 16:2)

1. Khar'kovskiy avtomobil'no-dorozhnyy institut.
(Motor vehicles--Engines)

ISAYEV, V.

Unit for applying metal coatings. Mashinostroitel' no.6:11 Je '63. (MIRA 16:7)

(Metal spraying)

ISAYEV, V.

Cards for the selection of efficient cutting conditions.
Mashinostroitel' no. 5:36 My '64. (MIRA 17:7)

ISAYEV, V., inzh.; PODSHCHEKOLDIN, M., kand.tekhn.nauk

Characteristics of the overhaul of motorbuses. Avt.transp. 41 no.11:34-37 N '63. (MIRA 16:12)

ISAYEV, V.A.

MKRTCHYAN, Derenik Petrovich; KHRUSHCHEV, Vitaliy Vasil'yevich; MAGIN, S.M., nauchnyy redaktor; ISAYEV, V.A., redaktor; DVORAKOVSKAYA, A.A., tekhnicheskiy redaktor; FRUMKIN, P.S., tekhnicheskiy redaktor

[Single-phase synchros] Odnofaznye selsiny. Leningrad, Gos.soiuznoe izd-vo sudostroit. promyshl., 1957. 343 p. (MLRA 10:9)
(Remote control)

ISAYEV, V.A.

Ul'yanov, Boris Ivanovich

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Antenny (Antennas) Leningrad, Sudpromgiz, 1957. 231 p. 30,000 copies printed

Scientific Ed.: Vlasov, V.I.; Ed.: Isayev, V.A., Tech. Ed.: Levochkina, L.I.

PURPOSE: The monograph is intended to serve as a textbook for students of radio engineering tekhnikums and is recommended as such by the Upravleniye srednikh spetsial'nykh uchebnykh zavedeniy Ministerstva vysshego obrazovaniya SSSR (Administration for Special Secondary Schools of the USSR Ministry of Higher Education). It can be of use also for a wide circle of radio specialists.

COVERAGE: The book sets forth problems relating to the general theory of antennas and examines antenna feeder systems for various wave ranges. Special attention is given to waveguide antenna systems. The present-day concept of the electromagnetic field as an aspect of matter is taken as the basis for

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describing the physical processes occurring in antenna feeder systems. There are 42 references, of which 34 are Soviet, and 8 are translations into Russian.

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PRYANISHNIKOV, Dmitriy Nikolayevich, akademik; ISAYEV, V.A., red.

[Chemicalization of agriculture and proper crop rotations] O khimizatsii zemledeliia i pravil'nykh sevooborotakh. Moskva, Izd-vo "Znanie," 1965. 45 p. (Novoe v zhizni, nauke, tekhnike. V Seriia: Sel'skoe khoziaistvo, no.11) (MIRA 18:6)

KANTOROVICH, Aleksandr Veniaminovich; ISAYEV, V.A., red.

[Flag officer of Soviet agronomy] Flagman sovetskoi agronomii. Moskva, Znanie, 1965. 47 p. (Novoe v zhizni, nauke tekhnike. V Seriia: Sel'skoe khoziaistvo, no.21)
(MIRA 18:10)

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[Mineral-ceramic cutting tools and milling cutters; practices of the "Krasnoe Sormovo" Plant] Mineralokeramicheskie reztsy i frezy; iz opyta zavoda "Krasnoe Sormovo." Leningrad, Gos. Soiuznoe izd-vo sudostroit. promyshl., 1957. 70 p. (MIRA 11:5)
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Isayev, V.A.

KHENKIN, Mark L'vovich; GULYAYEV, B.B., nauchnyy red.; ISAYEV, V.A., red.; FRUMKIN, P.S., tekhn. red.

[Improving the mechanical properties and increasing the solidity of steel castings] Uluchshenie mekhanicheskikh svoistv i povyshenie plotnosti stal'nykh otlivok. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1957. 109 p. (MIRA 11:7)
(Steel castings)

ARTSIMOVICH, Aleksandr Nikolayevich; KASHIN, N.V., otvetstvennyy redaktor; ISAYEV, V.A., redaktor; KONTOROVICH, A.I., tekhnicheskiy redaktor

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(Instrument industry)

BOZHENKO, Vladimir Semenovich; SMIRNOV, V.I., nauchnyy red.; ISAYEV, V.A., red.; LEVOCHKINA, L.I., tekhn. red.

[Sensitivity and accuracy of balancing machines] Chuvstvitel'nost' i tochnost' stankov uravnoveshivaniia. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1958. 50 p. (MIRA 11:9)
(Balancing of machinery)

ISAYEV, V.

Separate norm for every machine tool. Mashinostroitel' no.8:29 Ag '61. (MIRA 14:7)
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ISAYEV, V.

Workers manage the production. Mashinostroitel' no.7:23 Jl '62. (MIRA 15:7)

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ISAYEV, V.

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(Technological innovations)

ROGACHEV, Sergey Vladimirovich, kand. ekon. nauk; ISAYEV, V.A., red.

[How production funds save time; production funds and labor productivity] Kak proizvodstvennye fondy ekonomiat vremia; proizvodstvennye fondy i proizvoditel'nost' truda. Moskva, Izd-vo "Znanie," 1965. 30 p. (Novoe v zhizni, nauke, tekhnike. V Seriia: Sel'skoe khoziaistvo, no.4) (MIRA 18:1)

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[Automatic machines on a dairy farm; new milking machines] Avtomaty na molochnoi ferme; novye doil'nye mashiny. Moskva, Izd-vo "Znanie," 1965. 46 p. (Novoe v zhizni, nauke, tekhnike. V Seriia: Sel'skoe khoziaistvo, no.2) (MIRA 18:1)

SHAMSHIN, Andrey Semenovich, kand. sel'khoz. nauk; [illegible], V.I., red.

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REVUT, Isaak Borisovich, kand. sel'khoz. nauk; ISAYEV, V.A., red.

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LATINSKIY, Semen Aleksandrovich, kand. tekhn. nauk; ISAYEV, V.A., red.

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[Light and the plant] Svet i rastenie. Moskva, Znanie, 1965. 45 p. (Novoe v zhizni, nauke, tekhnike. V Seriia: Sel'skoe khoziaistvo, no.9) (MIRA 18:4)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Moshkov).

ANOKHIN, Vladimir Grigor'yevich; ISAYEV, V.A., red.

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IVANOV, Mikhail Mikhaylovich, doktor veter. nauk; ISAYEV, V.A., red.

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VYAZEMTSEVA, Valentina Nikitichna; KONEVA, Eleonora Dmitriyevna; ISAYEV, V.A., red.

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PAVLENKO, Vladimir Georgiyevich; BLAGOVESHCHENSKIY, S.N., otvetstvennyy redaktor; ISAYEV, V.A., redaktor; KAMOLOVA, V.M., tekhnicheskiy redaktor

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(Stability of ships)

GENKIN, Mikhail Dmitriyevich; GRINKEVICH, Vladimir Kazimirovich; SELIVANOV, K.I., nauchnyy red.; ISAYEV, V.A., red.; FRUMKIN, P.S., tekhn.red.

[Noise in reduction gears of ship engines] Shum reduktorov sudovykh dvigatelei. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1957. 79 p. (MIRA 11:3)

(Marine engines) (Noise)

PUTYATO, Yuriy Sergeyevich; TSAL, K.I., nauchnyy red.; ISAYEV, V.A., red.; FRUMKIN, P.S., tekhn.red.

[Assembling electric equipment on ships] Montazh sudovogo elektrooborudovaniia. Leningrad, Gos.soiuznoe izd-vo sudostroit. promyshl., 1957. 559 p. (MIRA 11:3)
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VOROB'YEV, Sergey Andreyevich, doktor sel'khoz. nauk; ISAYEV, V.A., red.

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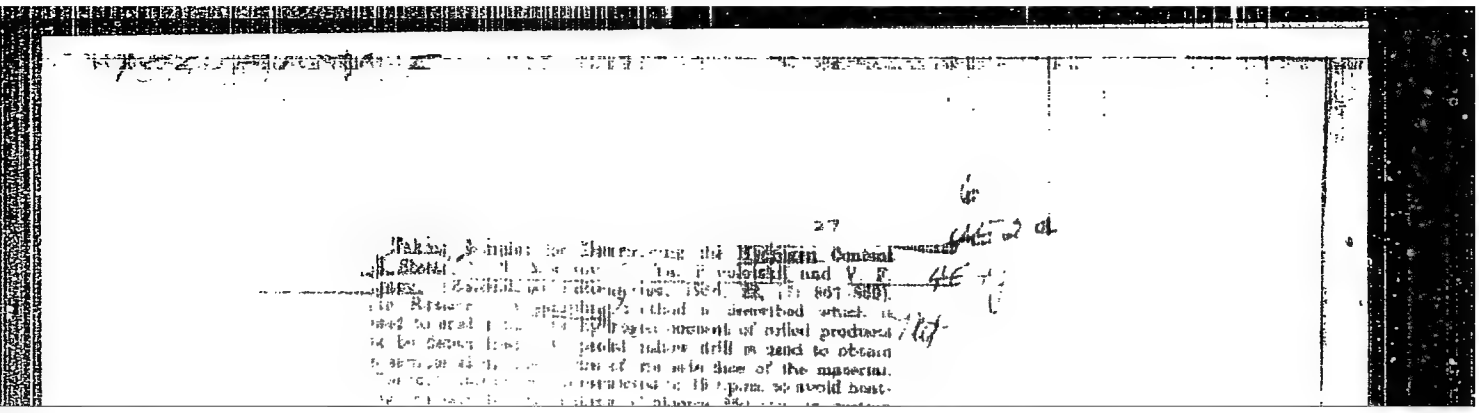
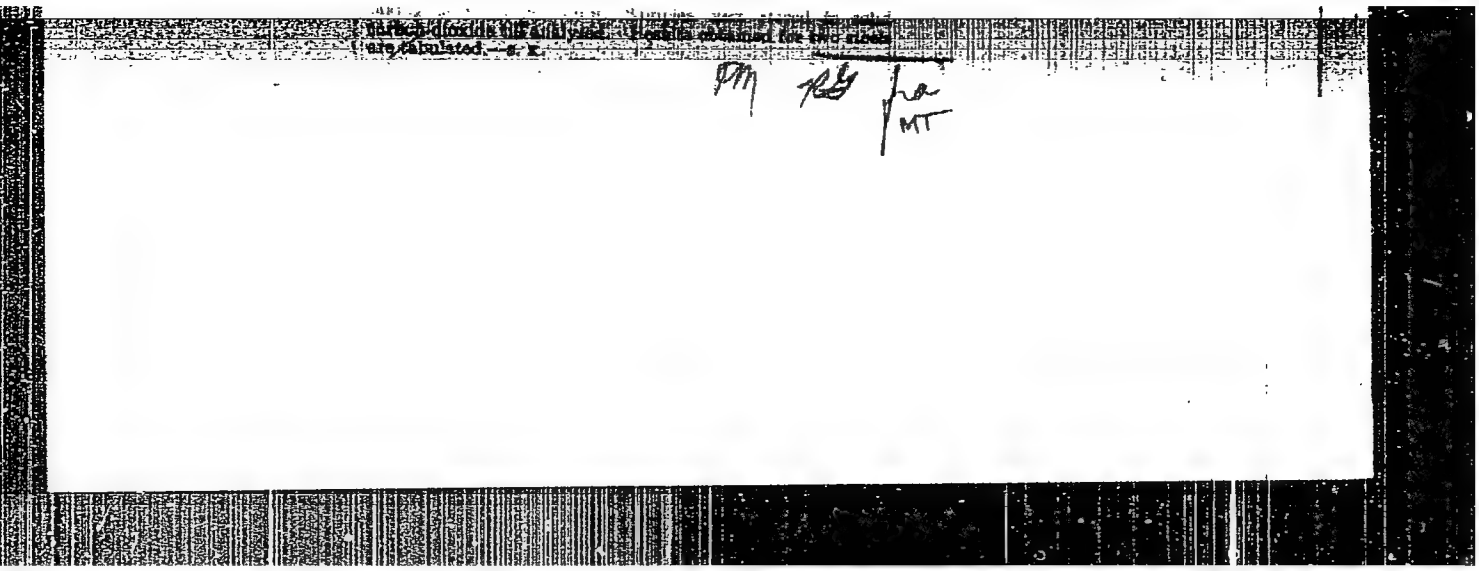
[Storehauses of feeds; on increasing the protein content of feeds] Kladovye kormov; o povyshenii soderzhaniia belkov v kormakh. Moskva, Izd-vo "Znanie," 1965. 29 p. (Novoe v zhizni, nauke, tekhnike. V Seriia: Sel'skoe khoziaistvo, no.10) (MIRA 18:5)





SOV/137-58-8-16552

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 46 (USSR)

AUTHORS: Kolosov, M.I., Morozov, A.N., Stroganov, A.I., Isayev, V.F., Keys, N.V., Vaynshteyn, O.Ya.

TITLE: The Rate and Sequence of Crystallization in Ingots of Killed Steel (Skorost' i posledovatel'nost' kristallizatsii slitkov spokoynoy stali)

PERIODICAL: V sb.: Primeneniye radioaktivn. izotopov v chernoy metallurgii. Chelyabinsk, Knigoizdat, 1957, pp 95-105

ABSTRACT: Radioactive Fe^{59} (introduced in the form of Fe oxide) was employed in conjunction with the method of overturning of molds in order to investigate crystallization processes in ingots of steel ShKh15SG (2.65 t) and of steels 10 and 45 (6.2-t ingots). The radioactivity of various zones of the ingot was determined from the radiation intensity of 3.5-g specimens of metal drilled out on different levels of a longitudinal templet of the ingot. As the crystallization progresses, the two-phase region on the sides of the ingot amounts to 30-50 mm. After the formation of a zone of columnar crystals, a two-phase region fed with liquid metal from the central part is formed in the lower part

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The Rate and Sequence of Crystallization in Ingots of Killed Steel

of the ingot. In a 6.2-ton ingot, the height of this zone extends to 850 mm. Up to a certain time (approximately 80 min in the case of the 6.2-t ingot) the thickness of the crystallized layer (including the two-phase region) taken in a horizontal section of the ingot is proportional to the square root of the crystallization time. Deviations from this relationship, which occur toward the end of the crystallization period, are attributable to a more rapid formation of a two-phase region at the center of the ingot. Extension risers, employed in production of high-quality steel ingots, may be removed only after the crystallization of the ingot has been completed. Bibliography: 19 references.

Ya.L.

1. Steel--Crystallization 2. Iron isotopes (Radioactive)--Applications

ISAYEV, V. F.

137-1958-1-337

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 52 (USSR)

AUTHORS: Morozov, A.N., Stroganov, A.I., Vaynshteyn, O.Ya., Isayev, V.F.

TITLE: Rate of Solution of Scrap Iron in Open Hearth Furnaces After Charging of Pig Iron (Skorost' rastvoreniya zheleznogo loma v martenovskikh pechakh posle zalivki chuguna)

PERIODICAL: V sb.: Primeneniye radioaktivn. izotopov v chernoy metallurgii. Chelyabinsk, Knigoizdat, 1957, pp 135-144

ABSTRACT: The radioactive isotopes P^{32}, introduced into the furnace with the ore, and CO^{60}, introduced into the pig iron ladle when pig iron from the mixer is poured into it, were used to study the rate of fusion of the scrap in 380-t open hearth furnaces operating on scrap and ore. Samples of metal for measurement of radioactivity were taken during the heat, the amount of scrap fusing being established by the change in the intensity of radiation by the metal specimens relative to the intensity of radiation of the pig iron. Curves showing the radioactivity of the metal during the heat, and curves of the change in its composition are presented. A specimen calculation of the rate of fusion of scrap iron on the basis of radioactivity measurement is presented. It is remarked

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137-1958-1-337

Rate of Solution of Scrap Iron (cont.)

that fusion of the scrap iron does not proceed uniformly; 60-70 % is dissolved rapidly in the pig, whereas the remainder follows more slowly. The rate of carbon elimination during the heat is determined.

M.Kh.

1. Open hearth furnaces--Performance--Test results 2. Ores--Melting rate--Determination 3. Iron--Melting rate--Determination 4. Carbon --Elimination 5. Phosphorus isotopes (Radioactive)--Applications 6. Cobalt isotopes (Radioactive)--Applications 7. Liquid metals --Sampling

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61467

18.3200 SOV/137-59-5-9962

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 75 (USSR)

AUTHORS: Kolosov, M.I., Morozov, A.N., Stroganov, A.I., Isayev, V.F., Keys, N.V., Vaynsteyn, O.Ya.

TITLE: The Rate and Sequence of Crystallization in Killed Steel Ingots

PERIODICAL: V sb.: Metallurgiya i metallovedeniye, Moscow, AS USSR, 1958, pp 133 - 137

ABSTRACT: The authors investigated the crystallization in "ShKh15SG" steel ingots of 2.65 t weight and in syphon-cast "10" and "45" grade steel ingots of 6.2 ton weight. The location of the crystallization front was determined at various moments by a consecutive multiple introduction of a thermic mixture of radioactive iron and Al-powder into the non-solidified section of each ingot. Subsequently, the concentration of the radioactive iron over the cross-section and the length of the solidified ingot was determined by radiometric means. Moreover, the non-solidified sections of "10" steel ingots were tapped at time intervals corresponding to the moments of

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The Rate and Sequence of Crystallization in Killed Steel Ingots

introducing the radioactive iron. The thickness of the solidified layer on the section of the ingot body (ostov) was measured. Results obtained by the described methods were compared and it was revealed that the cavity in the body of an overturned ingot was wider and deeper than the area of expansion of the radioactive iron introduced at the same moment. This discrepancy is explained by the presence of a two-phase zone located between the border of the radioactive iron expansion and the solidified layer. The two-phase zone consists of suspended (partially intergrown) crystals and liquid metal. The width of the two-phase zone at the lateral crystallization fronts does not exceed 30 - 50 mm; however, its expansion along the height in the lower axial section of the solidified ingot attains 850 mm. It is assumed that the two-phase zone is developed periodically during interrupted crystallization (in particular, at the moment of the completed growth of columnar crystals). The development of a two-phase zone in the lower axial section of the ingot is connected with the fact that crystals originating at the lateral crystallization fronts, are carried away by the descending flows of cooled-off metal and are accumulated in the bottom section of the solidified ingot. This explains

SOV/137-58-9-18676

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 75 (USSR)

AUTHORS: Morozov, A.N., Kolosov, M.I., Stroganov, A.I., Isayev, V.F., Keys, N.V., Vaynshteyn, O.Ya.

TITLE: A Nucleonic Study of the Rate and Sequence of Steel-ingot Crystallization (Izucheniye skorosti i posledovatel'nosti kristallizatsii stal'nykh slitkov pri pomoshchi radioaktivnykh indikatorov)

PERIODICAL: V sb.: Staleplavil'n. proiz-vo. Moscow, Metallurgizdat, 1958, pp 203-217

ABSTRACT: Radioactive tracers were used to investigate the crystallization of 2.65-t ingots of ShKh15SG and 6.2-t ingots of Nrs-10 and 45 steels, bottom poured. 3-5 batches of Fe^{59} (4.5-14.5 millicuries per t steel) were introduced as Fe_2O_3 mixed with Al powder. The tops of the ingots were held in the liquid state by periodic additions of lunkerite pipe eliminator. At the same time, crystallization of Nr-10 steel was also studied by overturning three ingots on single stool at different time intervals after pouring. The isotope was introduced at the moments when the residual liquid metal from each of these ingots was poured

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A Nucleonic Study of the Rate and Sequence of Steel-ingot Crystallization

into a fourth on the same stool. The thickness of the frozen layer as determined by radiography was greater than when determined by pouring out the liquid residue of the metal. This is explained by the fact that the zones of isotope distribution describe the region of the ingot occupied by liquid metal, whereas the thickness of the crystallized layer determined by pouring out defines the region of solid metal phase alone. The difference between them is the magnitude of the region in which two phases exist. The length of that region along the sides of the ingot in the course of crystallization does not exceed 30-40 mm. At the conclusion of the formation of the zone of columnar crystals in the bottom of the 6.2-t ingot there arises a two-phase region attaining 850 mm in height. This region comes into being as the result of the accumulation of equiaxed crystals that have torn away after formation on the interface between the solid and liquid phases. The crystallization of the two-phase region is intermittent in nature. The development of V-segregation and axial porosity are dependent upon the taper of the ingot and the conditions under which the two-phase zone is fed liquid metal from the upper portion of the ingot. In the making of high-quality steel, the hot top should be removed only after the body of the ingot has completely hardened. Within given time limits, the thickness of the crystallized layer is proportional to the square root of the crystallization time; the proportionality factor therein,

SOV/137-58-9-18676

A Nucleonic Study of the Rate and Sequence of Steel-ingot Crystallization

which is 21-29 mm/min$^{0.5}$ for carbon steels, declines with reduction in the [C] of the steel.

1. Steel--Processing 2. Steel--Crystallization 3. Radioisotopes--Performance

L.K.

Card 3/3

ISAYEV, V.F.; MOROZOV, A.N.

Conditions for the formation of aluminum nitride in liquid iron. [Sbor. trud.] Nauch.-issl.inst.met. no.4:12-18 '61. (MIRA 15:11)

(Liquid metals) (Aluminum nitride)

ISAYEV, V.F.; MOROZOV, A.N.

Thermodynamic conditions of aluminum nitride formation in liquid iron. Izv.vys.ucheb.zav.; chern.met. 5 no.11:57-60 '62. (MIRA 15:12)

1. Nauchno-issledovatel'skiy institut metallurgii i Chelyabinskiy politekhnicheskiy institut.
(Liquid metals) (Aluminum nitride) (Vapor-liquid equilibrium)

ACCESSION NR: AR4015540 S/0137/63/000/011/A009/A009

SOURCE: RZh. Metallurgiya, Abs. 11A62

AUTHOR: Morozov, A. N.; Isayev, V. F.; Korolev, L. G.

TITLE: Solubility of nitrogen in alloys of iron with elements forming stable nitrides

CITED SOURCE: Sb. Teoriya i praktika metallurgii. Chelyabinsk, vy*p. 5, 1963, 8-11

TOPIC TAGS: nitrogen, nitrogen solubility, iron alloy, nitride, stable nitride

TRANSLATION: It is shown that when a solid nitride is present on the surface of Me, the equilibrium of the system is determined by the reaction $(R_xN_{Tb} \rightleftarrows x[R] + (1/2)N_2$, where R is the content of Ti, Al, V, and other elements forming stable nitrides. It is shown that the nitrides AlN, TiN, and $V_{1.17}N$ form in Fe alloys and that the solubility of N_2 in binary mixtures of Fe with Ti, Al, and V obeys the Siwertz law only under conditions excluding the formation of nitrides. It

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ACCESSION NR: AR4015540

has been found that the dissociation elasticity of nitrides reaches 1 atm for 0.05% Ti, 0.9% Al, and 1.1-1.2% V. 1 illustration. A. Vertman.

DATE ACQ: 09Dec63 SUB CODE: ML, CH ENCL: 00

Card 2/2

ACCESSION NR: AP4029829 S/0279/64/000/002/0013/0016

AUTHOR: Isayev, V. F. (Chelyabinsk); Morozov, A. N. (Chelyabinsk)

TITLE: Nitrogen solubility and nitride formation in iron-boron melts

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 2, 1964, 13-16

TOPIC TAGS: nitrogen, nitride, iron, boron, boron containing steel

ABSTRACT: Boron is widely used in metallurgy for the microalloying of steel. The properties of boron-containing steel are determined to a considerable degree by the character of its boron compounds. The formation of a nitride inhibits the positive effect of boron on the properties of dead melt brands of construction steels, but, on the other hand, gives nonrust properties to boiling steels. The formation conditions for boron nitride in liquid melts had not previously been studied. The effect of boron on the solubility of nitrogen in iron also had not been determined. The only publication regarding this problem (Fountain, R. W.; Chipman, G. Solubility and Precipitation of Boron Nitride in Iron. Boron alloys. Trans. Metal Soc. AIME, 1962, v. 224, no. 3) was concerned with the effect of boron on the solubility of nitrogen in γ-iron and the explanation of thermodynamic conditions of boron nitride separation from iron. The equipment and method of research is similar to the authors'

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ACCESSION NR: AP4029829

previously described work. The results of investigation have shown that boron in the examined range of its concentrations sharply decreases the solubility of nitrogen in iron. The test data are presented in tables. Orig. art. has: 1 figure, 1 table and 13 formulas.

ASSOCIATION: none

SUBMITTED: 20Jul63 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: ML NO REF SOV: 007 OTHER: 002

Card 2/2

ISAYEV, V.I.

"The Question of the Prophylactic Effect of Hemosporidin During Pyroplasmosis of Horses and of the Prolonged Retention of the Preparation in the Animal Organism." Cand Vet Sci, Kazan' State Veterinary Inst, Kazan', 1954. (RZhBiol, No 7, Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

EWT(m)/T/EWP(t)/ETI IJP(c) JH/JD/WB

ACC NR: AT6024950 (A,N) SOURCE CODE: UR/2981/66/000/004/0341/0349

AUTHOR: Loktionova, N. A.; Kulakov, V. I.; Isayev, V. I.

ORG: none

TITLE: Heat treatment of products of AK6 aluminum alloy in hot media

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 341-349

TOPIC TAGS: metal heat treatment, aluminum alloy property

ABSTRACT: A study of the mechanical, corrosion and microstructural properties of pressed billets and stampings of AK6 alloy showed that in quenching in hot media, despite a marked decrease in cooling rate as compared to ordinary quenching in water at 20°C, a supersaturated α solid solution appears which is capable of hardening during aging and isothermal holding in a salt melt at the temperature of artificial aging. Industrial tests showed that stepwise and isothermal quenching schedules can be used only for stampings with a cross-sectional thickness of no more than 15 mm. Quenching in hot water at 90°C can be used for stampings with a cross-sectional thickness up to 50 mm without any appreciable decrease in properties. The observed slight decrease in properties during quenching in hot media is due to the predominant breakdown of the solid solution along the grain boundaries. For this reason, articles with a finely granular structure and a well-developed substructure are more sensitive to changes in

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ACC NR: AT6024950

the cooling rate than articles with a coarse-grained recrystallized structure. The general corrosion and stress corrosion after quenching in hot media are practically the same as after ordinary quenching followed by artificial aging. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004

Card 2/2

USSR/Medicine - Pharmacology FD-1913

Card 1/1 Pub. 38-12/18

Author : Isayev, V. I.

Title : A method for determining hemosporidin (LP_2) and the length of time it remains in an animal organism

Periodical : Farm. i. toks., 17, 50-51, Nov/Dec 1954

Abstract : Developed a colorimetric method for determining the amount of hemosporidine [N, N' - di- (4-dimethylaminophenyl carbamine methylsulfomethylate) a USSR piroplasmocidic preparation synthesized by Dr Chem Sci M. P. Gerchuk in 1941] in aqueous solutions and in urine of dogs and horses. Hemosporidine is eliminated from animal organisms through the urine and is still detected in the urine 22-28 hours after subcutaneous injection. Hence, hemosporidine injections are recommended to be repeated every eight to ten days during the piroplasmodic season. Chemical structural formula; three references (one USSR; all since 1940).

Institution: Chair of Pharmacology (Head - Prof P. I. Popov) Kazan State Veterinary Inst imeni N. E. Bauman

Submitted :

ISAYEV, V.I.; LASTKOV, O.A.

Nomogram for the determination of sugar in urine by Bertran's method. Lab. delo 7 no.2:36 F '61. (MIRA 14:1)
(URINE—ANALYSIS AND PATHOLOGY)
(SUGAR IN THE BODY)

ISAYEV V.I.

USSR / Farm Animals. Small Horned Stock. Q-2

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105675.

Author : Isayev, V. I.
Inst : Not given.
Title : Reserves of the Increase of Production of Wool and Mutton in the Cotton-Growing Kolkhozes of Azerbaydzhan.

Orig Pub: Ovtsevodstvo, 1958, No 3, 30-32.

Abstract: No abstract.

Card 1/1

ISAYEV, Vasiliy Il'ich; KOPTEVSKIY, D.Ya., red.; PERSON, M.N., tekhn.red.

[Laboratory work in electrical engineering] Laboratornye raboty po elektrotekhnike. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1959. 142 p. (MIRA 12:12)
(Electric engineering--Laboratory manuals)

ISAYEV, V. I. (Candidate of Veterinary Sciences, Novocherkoassk Zooveterinary Institute).

"Pharmacological evaluation of some antifermentative substances..."
Veterinariya, vol. 39, no. 2, February 1962 pp. 53

SHEVCHENKO, N.F., red.; AMELIN, F.S., red.; GRECHKO, V.Ye., red.; ISAYEV, V.I., red.; KUZUBOV, V.I., red.; LIBERMAN, Ye.G., prof., doktor ekonom.nauk, red.; MAKARENKO, V.P., red.; SHCHERBININ, I.F., red.; YARMOLOVICH, O.M., red.; KARDASH, G.I., red.; DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn.red.

[First and foremost; ways to further increase labor productivity in machinery manufacturing enterprises of Kharkov] Samoe vazhnoe, samoe glavnoe; o putiakh dal'neishego povysheniia proizvoditel'nosti truda na mashinostroitel'nykh predpriiatiiakh Khar'kova. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1960. 205 p. (MIRA 13:11)

1. Ukraine. Khar'kovskiy gorodskoy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. 2. Nachal'nik tekhnicheskogo otdela Khar'kovskogo sovnarkhoza (for Kuzubov). 3. Khar'kovskiy inzhenerno-ekonomicheskiy institut (for Liberman).
(Kharkov--Machinery industry--Labor productivity)

S/689/61/000/000/017/030
D205/D303

AUTHORS: Isayev, V.I., Ivankin, I.A., Kulakov, V.I., and Loktionova, N.A.

TITLE: Peculiarities of thermal treatment of massive drop-forged articles of the Д1 (D1) alloy

SOURCE: Fridlyander, I.N., V.I. Dobatkin, and Ye.D. Zakharov, eds. Deformiruyemyye alyuminiyevyye splavy; sbornik statey, Moscow, 1961, 131 - 136

TEXT: This paper is concerned with some peculiarities of the thermal treatment of massive aluminum alloy (D1) articles and the influence of certain factors of the treatment on the values of the residual stresses and mechanical properties. The forgings were prepared by axial hammering of the casting. Test specimens were cut out from the forged articles in various directions with respect to the fiber. Large differences were revealed between the various specimens cut out from the same forging. The strength limit ranged from 31.8 to 41.8 kg/mm^2 and the relative elongation in samples cut out parallel to the

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fiber was more than twice as much as those of the transverse samples. It was found that hardening from 490°C after 2 hours at that temperature reduced cracking defects down to 0.2 %. Still better results were obtained by quenching in hot media (80°C water on 145 - 155°C salt melts in step hardening). It was shown that cracks develop because of residual thermal stresses which are formed during hardening and tend to concentrate at the passages from thin to thick sections of the articles. There are 2 figures, 3 tables and 1 Soviet-bloc reference.

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S/689/61/000/000/018/030
D205/D303

AUTHORS: Loktionova, N.A., Kozlovskaya, V.P., and Isayev, V.I.

TITLE: Reduction of warping of welded constructions from the D20 (D20) alloy during thermal treatment

SOURCE: Fridlyander, I.N., V.I. Dobatkin, and Ye.D. Zakharov, eds. Deformiruyemyye alyuminiyevyye splavy; sbornik statey, Moscow, 1961, 137 - 143

TEXT: Although the highest mechanical properties (40 - 45 kg/mm^2 strength limit and 29 - 32 kg/mm^2 yield point) are obtained in the welded joints of D20 by using argon-arc welding, the warping induced by the hardening of the welded articles makes their subsequent adjustment by deformation necessary. In order to reduce the thermal stresses, the influence of quenching in boiling water and molten salts on the geometrical stability of the welded articles was investigated. The investigations were performed on sheets 6 mm thick. The specimens were heated at 535°C in saltpeter and cooled: 1 - in water at 20 and 100°C; 2 - according to a step regime - in salt baths at 160 -

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Reduction of warping of welded ...

200°C range (2 min) and then in water at 30°C; 3 - in salt baths at 160 - 180°C for 2 to 16 hours. In the first two cases, the specimens were aged after cooling at 165°C for 10 - 16 hours. All specimens, notwithstanding the differences in cooling conditions, had almost identical mechanical properties (about 40.5 Kg/mm^2 strength limit, 30.5 kg/mm^2 yield point and 14 % relative elongation). This indicates that the D20 alloy which contains copper in amounts exceeding the solubility limits is not sensitive to the lowering of the cooling rate during hardening. X-ray analysis has shown that the increase of the cooling temperature by 100 - 200°C lowers the defectivity of the grains, but does not entirely remove the general stresses. Corrosion tests were performed using welded specimens in a 3 % solution of NaCl. The specimens fastened to a rotating wheel were periodically immersed during the 4.5 months. The specimens cooled in water at 20°C were destroyed after 14 - 16 days, while those cooled in boiling water, salt baths and by the step regime remained intact after 130 days. Warping was 2 - 4 times less in the specimens cooled at higher temperatures. It is concluded that the welding of D20 alloy sheets should be carried out in the hardened and not in the annealed state, because

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